

CLAIMS

WHAT IS CLAIMED IS:

1. A method for establishing a call to a wireless directory number (DN) associated with a wireless mobile station, said wireless DN being one of a non-geographic DN and a non-dialable DN, said method comprising:

receiving a local access DN at an originating switching node; identifying a signaling node associated with said local access DN;

obtaining, from a database residing at a home location register, said wireless DN associated with said local access DN;

utilizing said wireless DN to determine a route that includes said originating switching node and a visited switching node serving said wireless DN; and

establishing a connection to said wireless mobile station via said determined route.

- 2. A method as claimed in claim 1 wherein said local access DN is a geographic DN maintained at said originating switching node.
- 3. A method as claimed in claim 2 further comprising associating said geographic DN with said wireless DN in said database residing at said home location register prior to said receiving operation.

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A method as claimed in claim 1 wherein said local access DN is a first local access DN, said originating switching node is a first originating switching node, said first local access DN is maintained at said first originating switching node, and said method further comprises:

establishing a second local access DN maintained at a second originating switching node; and

associating each of said first local access DN and said second local access DN with said wireless DN in said database at said home location register.

- 5. A method as claimed in claim 1 wherein said originating switching node includes an Advanced Intelligent Network (AIN) capable Service Switching Point (SSP) and the signaling node comprises an AIN-capable Service Control Point (SCP).
- 6. A method as claimed in claim 1 wherein said identifying operation comprises invoking a trigger at said originating switching node indexed as a function of said local access DN.
- 7. A method as claimed in claim 1 further comprising:
 transmitting, in response to said identifying operation, a
 route request from said originating switching node to said
 signaling node that includes said local access DN; and

sending a location request to said home location register that includes said local access DN.



8. A method as claimed in claim 1 wherein said obtaining operation comprises:

receiving, at said home location register, a location request from said signaling node that includes said local access DN; and accessing said database to obtain said wireless DN associated with said local access DN.

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- 9. A method as claimed in claim 1 further comprising sending, in response to said obtaining operation, a routing request that includes said wireless DN to a visitor location register with which said wireless mobile station was last registered.
- 10. A method as claimed in claim 9 further comprising:
 receiving, at said home location register, a temporary local
 directory number (TLDN) associated with said wireless DN in
 response to said routing request; and

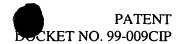
employing said local access DN to forward said received TLDN to said originating switching node.

11. A method as claimed in claim 10 wherein said employing operation comprises:

obtaining, from said database, said local access DN associated with said wireless DN;

associating said local access DN with said TLDN;





forwarding said TLDN associated with said local access DN to said signaling node; and

relaying said TLDN associated with said local access DN from said signaling node to said originating switching node.

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12. A telecommunications network comprising:

an originating switching node configured to determine when a local access directory number (DN) associated with a wireless mobile station has been received and to generate a routing request that includes said local access DN;

a signaling node in communication with said originating switching node, said signaling node being configured to send a location request that includes said local access DN in response to receipt of said routing request;

a home location register in communication with said signaling node, said home location register including a database having a wireless DN associated with said local access DN, said wireless DN being one of a non-geographic DN and a non-dialable DN, said home location register being configured to access said database to obtain said wireless DN and utilize said wireless DN to obtain a temporary local directory number (TLDN) allocated to said wireless mobile station; and

a visited switching node serving said wireless DN, wherein said originating switching node is operative to establish a connection to said wireless mobile station using said TLDN via a route that includes said originating switching node and said visited switching node.

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- 13. A network as claimed in claim 12 wherein said local access DN is a geographic DN maintained at said originating switching node.
- 14. A network as claimed in claim 12 wherein said originating switching node includes an Advanced Intelligent Network (AIN) capable Service Switching Point.
- 15. A network as claimed in claim 12 wherein said originating switching node includes a trigger for identifying a call destined to said wireless DN.
- 16. A network as claimed in claim 15 wherein said trigger includes an index and an identifier identifying said signaling node.
- 17. A network as claimed in claim 12 wherein said signaling node includes an Advanced Intelligent Network (AIN)-capable Service Control Point.
- 18. A network as claimed in claim 12 wherein said home location register is further configured to receive said TLDN from a visitor location register (VLR) with which said wireless mobile station was last registered, said TLDN being associated with said wireless DN, and said home location register is further

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configured to forward said TLDN to said signaling node utilizing said local access DN.

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19. In a telecommunications network having an originating switching node, a signaling node, a visitor location register, and a visited switching node, a home location register system for determining a route for a call to a wireless directory number (DN) associated with a wireless mobile station, said wireless DN being one of a non-geographic DN and a non-dialable DN, and said route including said originating switching node and said visited switching node serving said wireless DN, said system comprising:

a processor;

a database, in communication with said processor, in which said wireless DN is associated with each of a first and a second local access DN, said first local access DN being maintained at a first originating switching node and said second local access DN being maintained at a second originating switching node;

a computer-readable storage medium; and

executable code recorded on said computer-readable storage medium for instructing said processor to perform operations comprising:

receiving a location request from said signaling node that includes one of said first and second local access DNs; accessing said database to obtain said wireless DN associated with said one of said first and second local access DNs;

sending a routing request that includes said wireless DN to said visitor location register with which said wireless mobile station was last registered;

receiving a temporary local directory number (TLDN)
associated with said wireless DN in response to said
routing request; and

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employing said local access DN to forward said received TLDN to said signaling node.

20. A home location register system as claimed in claim 19 wherein said executable code instructs said processor to perform further operations comprising:

obtaining from said database, in response to said receiving operation, said one of said first and second local access DNs associated with said wireless DN;

associating said one of said first and second local access DNs with said TLDN; and

forwarding said TLDN associated with said one of said first and second local access DNs to said signaling node, said TLDN being used to establish a connection to said wireless mobile station via said route.